CLAIMS

We claim:

1. A compound having the following structure:

$$(R_{3a}R_{3b}C)_n$$
 R_4
 R_5

or a stereoisomer, prodrug or pharmaceutically acceptable salt thereof,

wherein:

A is O, S, $-OCR_7R_8$ -, or NR₇; n is 2, 3 or 4;

 R_1 and R_2 are the same or different and independently hydrogen, alkyl, substituted alkyl, aryl, substituted arylalkyl, substituted arylalkyl, heterocycle, substituted heterocycle, heterocyclealkyl, substituted heterocyclealkyl, $-C(R_8)(=NR_9)$ or $-C(NR_{10}R_{11})(=NR_9)$;

or R_1 and R_2 taken together with the nitrogen atom to which they are attached form a heterocycle or a substituted heterocycle;

 R_{3a} and R_{3b} are the same or different and, at each occurrence, independently hydrogen, alkyl, substituted alkyl, alkoxy, alkylthio, alkylamino, aryl, substituted aryl, arylalkyl, substituted arylalkyl, heterocycle, substituted heterocycle, heterocyclealkyl, substituted heterocyclealkyl, -COOR₁₂ or -CONR₁₀R₁₁;

or R_{3a} and R_{3b} taken together with the carbon atom to which they are attached form a homocycle substituted homocycle, heterocycle or substituted heterocycle;

or R_{3a} and the carbon to which it is attached taken together with R_1 and the nitrogen to which it is attached form a heterocycle or substituted heterocycle;

R₄ is aryl, substituted arylalkyl, substituted arylalkyl, heteroaryl, substituted heteroaryl, heteroarylalkyl or substituted heteroarylalkyl;

R₅ is hydrogen, alkyl, or substituted alkyl;

 R_6 is aryl, substituted aryl, heteroaryl, or substituted heteroaryl;

R₇ is hydrogen, alkyl, substituted alkyl;

R₈ is independently hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, arylalkyl, substituted arylalkyl, heterocycle, substituted heterocycle, heterocyclealkyl or substituted heterocyclealkyl;

R₉ is independently hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, arylalkyl, substituted arylalkyl, heterocycle, substituted heterocycle, heterocyclealkyl or substituted heterocyclealkyl;

R₁₀ and R₁₁ are the same or different independently hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, arylalkyl, substituted arylalkyl, heterocycle, substituted heterocycle, heterocyclealkyl or substituted heterocyclealkyl; and

R₁₂ is hydrogen, alkyl, or substituted alkyl.

- 2. The compound of claim 1 wherein R₁ is hydrogen, alkyl, substituted alkyl, arylalkyl, substituted arylalkyl, heterocyclealkyl or substituted heterocyclealkyl.
- 3. The compound of claim 1 wherein R₄ is aryl, substituted aryl, arylalkyl, substituted arylalkyl, heteroarylalkyl or substituted heteroarylalkyl.
- 4. The compound of claim 1 wherein R₆ is substituted aryl, heteroaryl, or substituted heteroaryl.
- 5. A pharmaceutical composition comprising a compound of claim 1 and a pharmaceutically acceptable carrier or diluent.

- 6. A method for antagonizing gonadotropin-releasing hormone in a subject in need thereof, comprising administering to the subject an effective amount of a compound of claim 1.
- 7. A method for treating a sex-hormone related condition of a subject in need thereof, comprising administering to the subject an effective amount of the pharmaceutical composition of claim 5.
- 8. The method of claim 7 wherein the sex-hormone related condition is cancer, benign prostatic hypertrophy or myoma of the uterus.
- 9. The method of claim 8 wherein the cancer is prostatic cancer, uterine cancer, breast cancer or pituitary gonadotroph adenomas.
- 10. The method of claim 7 wherein the sex-hormone related condition is endometriosis, polycystic ovarian disease, uterine fibroids or precocious puberty.
- 11. A method for preventing pregnancy of a subject in need thereof, comprising administering an effective amount of the pharmaceutical composition of claim 5.
- 12. A method for treating lupus erythematosis, irritable bowel syndrome, premenstrual syndrome, hirsutism, short stature or sleep disorders of a subject in need thereof, comprising administering to the subject an effective amount of the pharmaceutical composition of claim 5.